MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2015/2016

BAC3674 – ADVANCED MANAGEMENT ACCOUNTING

(B01)

1 JUNE 2016
9.00AM – 12.00 NOON
(3 HOURS)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 9 **pages** (exclusive of cover page).

2. **Answer ALL FOUR (4) questions.** All questions carry equal marks and the distribution of the marks for each question is given.

3. Please provide all your answers in the Answer Booklet provided.

Question 1

You are the management accountant for FOB Sdn. Bhd. that produces and sells 750 units of Product A (deluxe model) and 7,000 units of Product B (standard model) each year.

Currently, costing in the production area is based on standard costing system using overhead absorbed on machine hours. Details of the two products for a typical period are:

	Hours per unit			
	Labour hours	**Machine hours**	**Materials Cost per unit RM**	**Production Units**
Product A	1	2	30	750
Product B	2	4	35	7,000

Direct labour costs is RM8 per hour. The overhead absorption rate for the period is RM30 per machine hours.

FOB Sdn. Bhd. marks its products up by 50%.

Sales of Product A have increased steadily since introduction, but company income has declined. Management at FOB Sdn. Bhd. is unhappy with the traditional costing system and they have decided to try activity-based costing (ABC).

Management has identified the following four activities in the production of the two products. The production overheads are RM885,000 and further analysis shows that the total production overheads can be divided as follows:

	%
Costs relating to set-ups	35
Costs relating to machinery	20
Costs relating to material handling	15
Costs relating to inspection	30
Total production overhead	100

The following total activity volumes are associated with each product line for the period as a whole:

	Number of set up	Number of movements of materials	Number of inspections	Machine hours
Product A	100	20	150	1,500
Product B	500	100	850	28,000
Total	600	120	1000	29,500

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Required:

a) Calculate the cost per unit for each product using traditional methods, absorbing overheads on the basis of machine hours. (2 marks)

b) Calculate the cost per unit for each product using ABC system (rounded to two decimal places) (9 marks)

c) Explain why costs per unit calculated under ABC are often very different to costs per unit calculated under traditional methods. Use the information from FOB Sdn. Bhd. to illustrate. (6 marks)

d) Discuss the implications of a switch to ABC system that might lead management to make different management decisions in terms of pricing and profitability of Product A and B. (4 marks)

e) What is Activity-based Management (ABM) and describe the four steps used in ABM to reduce costs. If activity-based management were implemented, which of the production overhead costs might be reduced or eliminated? Why? (4 marks)

[TOTAL 25 MARKS]

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Question 2

QL Mart (QL) is planning to open a convenient shop near a new housing development and office park. QL estimates that the current neighbourhood's retail market will be RM300,000 per year when the new housing and offices are occupied next year.

QL expects to capture 25% of the total neighbourhood market unless Speed Mart 88 also opens a new shop in the area. In that case, QL expects to gain only 10% of the market. QL's gross margin ratio is 30%. Its analysts believe there is a 40% chance that Speed Mart 88 will enter the market.

They have prepared the following estimates that they believe are valid for the first 4 years of the investment:

First year's market (year 1)	RM300,000
Annual market growth	10%
Market share without Speed Mart 88	25%
Market share with Speed Mart 88	10%
Gross margin ratio	30%
Opportunity (discount) rate	8%
Investment cost	RM40,000
Tax rate	35%
Depreciation (equivalent to capital allowance)	RM10,000 per year
SG&A	RM4,000 per year
Probability of Speed Mart 88 entry	40%

Discounting factor for present value of RM1 is as below:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
8%	0.926	0.857	0.794	0.735	0.681	0.630

All calculations are to be rounded to two decimal places.

Business losses (if any) generated can be utilised as a tax relief in the year itself.

Required:

a) Prepare the net present value analysis (with and without competitor) assuming that QL Mart can defer its investment decisions one year to resolve uncertainty about Speed Mar 88's intentions. (6 marks)

b) What does this analysis (as per (a)) indicate about the possible effects of Speed Mart's entry into the market? On the basis of this analysis, would you recommend that QL Mart defer its decision? (5 marks)

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c) Prepare the net present value analysis (with and without competitor) assuming that QL Mart makes its investment decision now without resolving the uncertainty about Speed Mart 88's intentions. Also assume that QL Mart can terminate its investment after one year and sells its assets for RM30,000.

(8 marks)

d) What does this analysis (as per (c)) indicate about what QL Mart should do if Speed Mart 88 does enter the market in a year? On the basis of this analysis, would you recommend that QL Mart invest in the new shop now? Explain.

(6 marks)

[TOTAL 25 MARKS]

Question 3

Total Quality Management (TQM) is a quality culture.

Required:

a) Define TQM (1 mark)
b) Explain the types of quality costs (2 marks)
c) Define Balanced Scorecard (BSC). (2 marks)
d) How can the BSC be used for measuring performance, i.e. how can it be operationalized?

(10 marks)

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The following Key Performance Indicators (KPIs) and their related measures are extracted from the different perspectives of the Balanced Scorecard (BSC) for a telecommunications company (telco) for the year 2015:

Balanced Scorecard Perspec-tive	**Key Performance Indicator (KPI)**		**Formula**	**Threshold to achieve the target**	**Achieved for 2015**
Internal Process	Note 1	% Call setup success rate (CSSR)	(Successful call attempts / Call attempts) x 100	98%	99.2 %.
Customer	Note 2	RM Telecom subscriber acquisition cost	RM Spend for gaining new subscribers / # Gross subscriber additions	< RM400	? Refer to Notes
Customer	Note 3	RM Telecom subscriber retention cost (SRC)	(RM Acquisition costs for the handset sold + RM Commission paid to retailers - RM Total revenues received from the sale of handset) / # Customers who renewed contract	RM400 - RM600	RM486
Customer	Note 4	% Answer seizure ratio (ASR)	(# Successfully answered calls - # Call attempts) x 100	> 90%	86.3%
Internal Process	Note 5	% Data network availability	(# Hours the data network is available / # Data network supported hours) x 100	> 99%	99.3%
Customer	Note 6	# Usage per telecom user (UPU)	# Minutes used in a given period / # Customers in the same period (average)	> 100 minutes	? Refer to Notes
Internal Process	Note 7	% Block error rate((BLER)	(# Erroneous blocks / # Blocks) x 100	< 5%	5.26%
Financial	Note 8	RM Revenue per user (RPU)	RM Revenue generated / # Users	> RM120	RM158
Internal Process	Note 9	% Mobile phone usage	(# People using a mobile phone device or service / # People in the targeted market) x 100	> 30%	38%
Customer	Note 10	# Network throughput	# Data delivered, in kilobytes / # Time needed to deliver it, in seconds	> 11 kilobytes per second	13.13 kilobytes / second
Customer	Note 11	# Prepaid mobile customers	# Pre-paid customers	> 70,000 customers	88,082 customer

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Notes:

1) Measures the percentage of call attempts that result in a connection to the dialed number, out of the total number of call attempts.

2) Measures the average cost of gaining a new subscriber to the service. The costs to acquire new subscribers refer to the marketing and advertising expenses, as well as other specific costs such as the subsidized provision of equipment (such as mobile phones), payment of commissions and the employment of sales staff. In 2015, the total amount spent for this was RM 12,840,000, resulting in securing 40,000 new customers.

3) Measures the sum of the acquisition costs for the handset sold and the commission paid to retailers from which are deducted the revenues received from the sale of handset for each customer renewing his contract.

4) Measures the percentage of calls that are answered out of the total successful call attempts connected. It is critically important to a telco since they usually charge for a call only when a circuit has been engaged.

5) Measures the percentage of time the data network is available out of the total supported hours.

6) Measures the total minutes used in a given period divided by the weighted average number of customers over the same period. It provides an indication of the volume of minutes used by the customers, and it can impact revenues, and therefore profit. For 2015, a total of 454,684,000 minutes was used involving an average of 3,202,000 customers.

7) Measures the ratio of the number of erroneous blocks to the total number of blocks received on a digital circuit. It is used for W-CDMA performance requirements tests (demodulation tests in multipath conditions, etc.), in the production process to test the performance of a GPRS mobile station's receiver. It indicates the frequency at which blocks must be retransmitted because of errors and gives a valid insight into the effect of errors on throughput.

8) Measures the income generated by a typical subscriber or device per unit time in a telecommunications network.

9) Measures the percentage of people who use the telco's mobile phone service or device out of the total people in the targeted market.

10) Measures the average amount of data transferred from one place to another, or processed, in kilobytes per second, in a specified amount of time.

11) Measures the number of mobile service subscribers who purchase credit in advance of service use.

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Required:

e) Calculate KPI No. 2 and KPI No. 6. (3 marks)

f) Evaluate the performance of this telco in 2015, using the following points:
- Overall performance in just one sentence
- In your opinion, why there are no KPIs for Learning and Growth Perspective
- In your opinion, why there is only one KPI for the Financial Perspective.
- Which do you think are the most important KPIs impacting critical success factors

(3 marks)

g) Isolate two KPIs that are related to quality costs, and give your rationale for selecting them.

(4 marks)

[TOTAL 25 MARKS]

Question 4

The sales revenue budget is the starting point for the master budget. Because of its importance, forecasting the sales for the coming budget period is crucial.

Required:

a) List at least two main factors that are considered when forecasting sales. (2 marks)

b) Briefly describe the Delphi method for forecasting sales. (2 marks)

Adam Company has been busy over the first few years of its existence in penetrating its market and gaining a respectable market share. To facilitate this, Mr. Adam, the CEO, and his controller, Mr. Brook, have been developing the annual master budgets. To date this approach has worked well.

Adam has been acquired by a company in a related business but will continue to operate as an independent subsidiary. The CFO of the acquiring company, Mr. Soros, has suggested to Mr. Adam that, since it was expected that his company would continue to grow, it adopt a departmental budgeting system; a suggestion Mr. Adam agreed to readily. Mr. Soros explained to Adam's departmental managers the concepts of a departmental participative budgeting system and their involvement. The managers were encouraged to take the information and come back with suggestions which could then be put into a formal budget process.

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Required:

c) What benefits will accrue to Adam under this new budgeting system? (2 marks)

d) What behavioral issues might arise for departmental managers and for production workers? (2 marks)

e) What is the most probable long-term reaction of Adam's people to the participative budget system? (2 marks)

Old Town Coffee Bhd decided to mass produce its famous white coffee. For the first six months of manufacturing operation, the sale of coffee cans has been steadily increasing as shown in the table below. It is the company's policy to manufacture based on orders received, so no stocks are kept. The prime cost for one can of coffee is RM 0.52, consisting of RM0.30 direct materials and RM0.22 direct labour.
The Overhead Expenditure for past six months is as follows:

	CANS OF COFFEE					
	January	February	March	April	May	June
	Units '000	Units '000	Units '000	Units '000	Units '000	Units '000
	1,000	1,100	1,200	1,372.8	1,400	1,500
VARIABLE COSTS	**RM '000**	**RM '000**	**RM '000**	**RM '000**	**RM '000**	**RM '000**
Indirect materials	110	121	132	151.008	154	165
Indirect labor	120	132	144	164.736	168	180
Total Variable Costs (RM)	**230**	**253**	**276**	**315.744**	**322**	**345**
FIXED COSTS						
Supervision (a stepped cost)	90	90	90	90	120	120
Depreciation & Insurance	100	100	100	10	100	100
Maintenance contract (step)	30	30	30	30	36	36
Total Fixed Costs (RM)	**220**	**220**	**220**	**220**	**256**	**256**
Mixed Cost i.e. Utilities	**16**	**17**	**18**	**19.728**	**20**	**21**
TOTAL OVERHEAD COST (RM)	**466**	**490**	**514**	**555.472**	**598**	**622**

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Supervision is expected to be RM120,000 when greater than 1,400,000 cans. Machine maintenance contract increase to RM 36,000 when greater than 1,400,000 cans. Utilities is a mixed cost.

For July, the company is expecting to receive orders totaling 1,600,000 coffee cans. Selling price for each can is RM1.50.

Required:

f) For July, show:

i) Sales Budgets	(2 marks)
ii) Direct Materials Budget	(2 marks)
iii) Direct Labour Budget	(2 marks)
iv) Variable Overheads Budget	(2 marks)
v) Fixed Overheads Budget	(1 mark)
vi) Total Overheads Budget	(5 marks)
vii) Cost of Sales Budget.	(1 mark)

[TOTAL 25 MARKS]

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